Amendments to the Claims 1-26:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A device for realizing beam-forming in CDMA system:

said device comprising in a forward signal flow, at least a base band system, an optical transceiver system, a transceiver system, an analog fixed beam-forming network, a power amplifier, a transmission filter at a radio frequency front end, and an antenna system;

said device comprising in a reverse signal flow, at least the antenna system, a reception filter at a radio frequency front end, a low noise amplifier, the analog fixed beam-forming network, the transceiver system, the optical transceiver system and the base band system;

the optical transceiver system comprising an optical fiber and an optical interface board close to the base band system and an optical interface board close to the transceiver system, and enabling the base band system be placed in a warehouse so as to make the base band system support more sectors, and a radio frequency part close to the antenna, thereby reducing power loss;

said optical interface board being used to interconvert electronic signals and optical signals input;

when transmitting forward signals, different beams are made to have different time delays so that they are not coherent with one another even when different beams carry the same information.

2. (original) The device for realizing beam-forming in CDMA system of claim 1, wherein:

said base band system is composed of at least one base band chip or/and one base band logic.

3. (currently amended) The device for realizing beam-forming in CDMA system of claim 1, wherein:

in a device composed of the analog fixed beam-forming network, when transmitting forward signals, in order to avoid mutual counteraction between multiple beams forming a common channel, first, different beams are made to have different time delays in the base band system ~~so that they do not correlate with one another even when different beams carry same information~~; then, after the signals pass through the optical fiber, different beams pass different transceiver systems, after passing their corresponding transceiver systems, the beams pass the analog fixed beam-forming network, and are amplified, filtered , and transmitted through antennas to forme beams with different directions in space.

4. (previously presented)The device for realizing beam-forming in CDMA system of claim 1, wherein:

said device composed of the analog fixed beam-forming network needs to correct the analog fixed beam-forming network, the power amplifier, the transmission and reception filter of radio frequency front end, the low noise amplifier, a feedback and the antenna system, and radio frequency cables therebetween.

5. (previously presented) The device for realizing beam-forming in CDMA system of claim 1, wherein:

said analog fixed beam-forming network may be Butler matrix, or Blass matrix, or electromagnetic lens of the Lunegberg or Rotman type.

6. (previously presented) The device for realizing beam-forming in CDMA system of claim 1, wherein:

said device comprises the base band system, the optical transceiver system, the transceiver system, an analog fixed beam-forming network formed by batter matrix, radio frequency cables between the transceivers and the analog fixed beam-forming network, radio frequency links including the power amplifier, the transmission filter and the reception filter of radio frequency front end, the low noise amplifier and a feedback line, and the antenna system;

said optical transceiver system, transceiver system, analog fixed beam-forming network, antenna system and radio frequency links therebetween can be placed on a tower or a holding pole so as to make the radio frequency cables therebetween as short as possible and easy to correct, therefore loss genetated on outputting power in the power amplifier is reduced, and an area covered is increased.

outputs of each sector of said base band system pass the transceiver system respectively, then pass the analog fixed beam-forming network, and, thereafter, reflect to fixed beams respectively;

beams formed in said common channel is equivalent to beams added by the fixed beams.

7. (currently amended) A device for realizing beam-forming in CDMA system,

said device comprising in a forward signal flow at least a base band system, a digital fixed beam-forming network, an optical interface module, a transceiver system, a power amplifier, a transmission filter of radio frequency front end and an antenna system;

said device comprising in a reverse signal flow at least the antenna system, a reception filter of radio frequency front end, a low noise amplifier, the transceiver system, the optical interface module, the digital fixed beam-forming network, and the base band system;

said optical transceiver system comprising an optical fiber, an optical interface board close to the base band system and an optical interface board close to the transceiver system, and enabling the base band system be placed in a warehouse so as to make the base band system support more sectors, and a radio frequency part close to the antenna, thereby reducing the power loss;

said optical interface board being used to interconvert electronic signals and optical signals input;

when transmitting forward signals, different beams are made to have different time delays in the base band system so that they do not correlate with one another even when the different beams carry the same information.

8. (original) The device for realizing beam-forming in CDMA system of claim 7, wherein:

said base band system is composed of at least one base band chip or/and one base band logic.

9. (currently amended) The device for realizing beam-forming in CDMA system of claim 7, wherein:

in a device composed of the digital fixed beam-forming network, when transmitting forward signals, in order to avoid mutual counteraction among multiple beams forming a common channel, first, different beams are made to have different time delays in the base band system~~, therefore, they do not correlate with one another even when the different beams carry same information~~; then, the different beams pass the digital fixed beam-forming network to make themselves have different space directions; after passing through the optical fiber, the different beams pass different transceiver systems, after the beams pass their corresponding transceiver systems, they are amplified, filtered , and transmitted through antenna to form beams with different directions in space.

10. (previously presented) The device for realizing beam-forming in CDMA system of claim 7, wherein:

said device composed of the digital fixed beam-forming network needs to correct the transceiver system, the power amplifier, the transmission and reception filters of radio frequency front end, the low noise amplifier, a feedback and the antenna system, and the radio frequency cables therebetween.

11. (previously presented) The device for realizing beam-forming in CDMA system of claim 7, wherein:

said device comprises the base band system, the digital fixed beam-forming network, an optical transceiver system, the transceiver system, radio frequency links including the power amplifier, the transmission and reception filters of radio frequency front end, the low noise amplifier, and a feedback line, radio frequency cables between the transceiver and the radio frequency links, and an antenna system;

said device needs to correct the transceiver system, the radio frequency links including the power amplifier, the transmission filter and reception filter of radio frequency front end, the low noise amplifier and the feedback etc., the radio frequency cables between the transceivers and the radio frequency links, the antenna system and the radio frequency cables between the above systems;

outputs of said base band system are reflected to the fixed beams respectively after passing the digital fixed beam-forming network, beams formed in a common channel are equivalent to beams added by the fixed beams.

12. (original) A method for realizing beam-forming in CDMA system, at least comprising the following steps of:

step one: in a base band, reflecting base band signals of each fixed beam to sectors of base band chips;

step two: making the base band signals of the fixed beams reflected to corresponding sectors of the base band chips have different time delays.

13. (original) The method for realizing beam-forming in CDMA system of claim 12, wherein, in said step one:

the base band signals of each fixed beam is reflected to different sectors of the base band chips; or

the base band signals of each fixed beam is reflected to same sectors of different base band chips.

14. (original) The method for realizing beam-forming in CDMA system of claim 12, wherein, in said step one:

when transmitting in a traffic channel of a user, the transmitting can be made only within certain fixed beam where the user locates, that is, the base band signals of the fixed beams for this user are reflected to one certain corresponding sector of the base band chips.

if the user locates among several beams, one or several narrow beams can be selected according to strengths of several user signals of beams received to transmit service data of the user, that is, the base band signals of the user is reflected to one or several corresponding sectors of the base band chips.

15. (original) The method for realizing beam-forming in CDMA system of claim 12, wherein, in said step one:

when transmitting in a common channel of each user, information of this channel should be transmitted in every fixed beam, that is, the information of the common channel is reflected to every sector of the base band chips.

16. (original) The method for realizing beam-forming in CDMA system of claim 12, wherein, said step two:

can be accomplished in the base band chips; or

can also be accomplished by digital logic components after the base band chips, that is, accomplished in the base band.

17. (original) The method for realizing beam-forming in CDMA system of claim 12, wherein, in said step two:

a quantity of the time delay is such that output signals of each sector of the base band chips do not correlate with one another when transmitting common channel information.

18. (previously presented) The method for realizing beam-forming in CDMA system of claim 12, wherein:
when transmitting common information, common channel beams do not correlate with one another when forming by making beams at an end of an antennas have different time delays, to avoid some aera correlating with and counteracting one another when each fixed beam composing beams covering a whole sector.

19. (previously presented) The device for realizing beam-forming in CDMA system of claim 2, wherein:

in a device composed of the analog fixed beam-forming network, when transmitting forward signals, in order to avoid mutual counteraction between multiple beams forming a common channel, first, different beams have different time delays in the base band system so that they do not correlate with one another even when different beams carry same information; then, after the signals pass through the optical fiber, different beams pass different transceiver systems, after passing their corresponding transceiver systems, the beams pass the analog fixed beam-forming network, and are amplified, filtered , and transmitted through antennas to forme beams with different directions in space.

20. (previously presented) The device for realizing beam-forming in CDMA system of claim 2, wherein:

said device composed of the analog fixed beam-forming network needs to correct the analog fixed beam-forming network, the power amplifier, the transmission and reception filter of radio frequency front end, the low noise amplifier, a feedback and the antenna system, and radio frequency cables therebetween.

21. (previously presentedl) The device for realizing beam-forming in CDMA system of claim 2, wherein:

said analog fixed beam-forming network may be Butler matrix, or Blass matrix, or electromagnetic lens of the Lunegberg or Rotman type.

22. (previously presented) The device for realizing beam-forming in CDMA system of claim 2, wherein:

said device comprises the base band system, the optical transceiver system, the transceiver system, an analog fixed beam-forming network formed by batter matrix, radio frequency cables between the transceivers and the analog fixed beam-forming network, radio frequency links including the power amplifier, the transmission filter and the reception filter of radio frequency front end, the low noise amplifier and a feedback line, and the antenna system;

said optical transceiver system, transceiver system, analog fixed beam-forming network, antenna system and radio frequency links therebetween can be placed on a tower or a holding pole so as to make the radio frequency cables therebetween as short as possible and easy to correct, therefore loss genetated on outputting power in the power amplifier is reduced, and an area covered is increased.

outputs of each sector of said base band system pass the transceiver system respectively, then pass the analog fixed beam-forming network, and, thereafter, reflect to fixed beams respectively;

beams formed in said common channel is equivalent to beams added by the fixed beams.

23. (previously presented) The device for realizing beam-forming in CDMA system of claim 8, wherein:

in a device composed of the digital fixed beam-forming network, when transmitting forward signals, in order to avoid mutual counteraction among multiple beams forming a common channel, first, different beams have different time delays in the base band system, therefore, they do not correlate with one another even when the different beams carry same information; then, the different beams pass the digital fixed beam-forming network to make themselves have different space directions; after passing through the optical fiber, the different beams pass different transceiver systems, after the beams pass their corresponding transceiver systems, they are amplified, filtered , and transmitted through antenna to form beams with different directions in space.

24. (previously presented) The device for realizing beam-forming in CDMA system of claim 8, wherein:

said device composed of the digital fixed beam-forming network needs to correct the transceiver system, the power amplifier, the transmission and reception filters of radio frequency front end, the low noise amplifier, a feedback and the antenna system, and the radio frequency cables therebetween.

25. (previously presented) The device for realizing beam-forming in CDMA system of claim 8, wherein:

said device comprises the base band system, the digital fixed beam-forming network, an optical transceiver system, the transceiver system, radio frequency links including the power amplifier, the transmission and reception filters of radio frequency front end, the low noise amplifier, and a feedback line, radio frequency cables between the transceiver and the radio frequency links, and an antenna system;

said device needs to correct the transceiver system, the radio frequency links including the power amplifier, the transmission filter and reception filter of radio frequency front end, the low noise amplifier and the feedback etc., the radio frequency cables between the transceivers and the radio frequency links, the antenna system and the radio frequency cables between the above systems;

outputs of said base band system are reflected to the fixed beams respectively after passing the digital fixed beam-forming network, beams formed in a common channel are equivalent to beams added by the fixed beams.

26. (previously presented) The method for realizing beam-forming in CDMA system of claim 17, wherein:

when transmitting common information, common channel beams do not correlate with one another when forming by making beams at an end of an antennas have different time delays, to avoid some aera correlating with and counteracting one another when each fixed beam composing beams covering a whole sector.